#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau



## 

## (43) International Publication Date 16 June 2005 (16.06.2005)

#### **PCT**

# (10) International Publication Number WO 2005/054820 A1

(51) International Patent Classification<sup>7</sup>:

G01N 17/00

(21) International Application Number:

PCT/IB2004/052653

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language:

Englis

(26) Publication Language:

English

(30) Priority Data:

2003/9462

5 December 2003 (05.12.2003) ZA

(71) Applicant (for all designated States except US): UNIVER-SITY OF PRETORIA [ZA/ZA]; Cnr Lynnwood & University Roads, Hatfield, 0002 Pretoria (ZA).

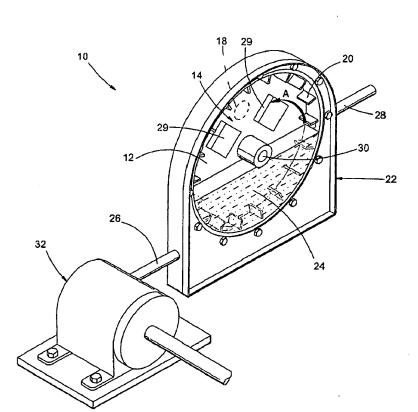
(72) Inventors; and

(75) Inventors/Applicants (for US only): CLOETE, Thomas Eugene [ZA/ZA]; Department of Microbiology and Plant Pathology, University of Pretoria, 0002 Pretoria (ZA). VAN VUUREN, Stefanus Johannes [ZA/ZA]; Department of Civil and Biosystems Engineering, University of Pretoria, 0002 Pretoria (ZA).

- (74) Agent: LE ROUX, Marius; D M Kisch INC, P O Box 781218, 2146 Sandton (ZA).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, IP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: METIIOD AND APPARATUS FOR MONITORING BIOFILM FORMATION



(57) Abstract: This invention relates to an apparatus (10) for monitoring biofilm formation on a surface (12). The apparatus (10) comprises a disk-shaped member (14) which provides said surface (12); and a sensor (16) for measuring biofilm formation on a measuring zone (18) of the surface (12). A plurality of bodies (29) are mounted on the surface (12) of the disk-shaped member (14) so that biofilm formation on different materials can be observed. apparatus (10) includes a housing (22) wherein the member (14) is Iocated. A body of liquid (24), such as water, is disposed inside the housing (22) and fills the housing (22) only partly. The member (14) is continuously moved into and out of the liquid (24) by being rotated about its central axis (30).

## WO 2005/054820 A1

GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.